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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,600	01/06/2006	Bo Hellman	1209-0153PUS1	4777
2292 7590 07/17/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LEUNG, PHILIP H	
			ART UNIT 3742	PAPER NUMBER
			NOTIFICATION DATE 07/17/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/539,600

Applicant(s)

HELLMAN, BO

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6-17-2005 & 10-14-2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. The drawings filed 6-17-2005 are acceptable.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The use of microwave heating should be reflected in the title.
3. Claims 8 and 9 provide for the use of a method and apparatus, respectively but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 8 and 9 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being obvious over Fagrell (WO 00/36880) or Di Martino et al (US 5,393,492) (both cited by the applicant), in view of Adams et al (US 6,060,288) or Janner et al (US 4,289,592).

Fagrell shows a method or apparatus for performing chemical reactions comprising: supplying substances 1 for a chemical reaction into a reaction chamber (24), which is adapted to withstand high temperature and pressure, applying microwave heating (28) to initiate the chemical reaction and reach a desired temperature and, instantaneous cooling the reaction mixture to a desired lower temperature by using cooling (as stated on page 6, lines 19-23; page 17, lines 15-26 and page 28, lines 1-11) (see Figures 1-6 and page 11, line 24 – page 16, line 21). Di Martino also shows a method or an apparatus for performing chemical reactions comprising: supplying substances for a chemical reaction into a reaction chamber (2), which is adapted to withstand high temperature and pressure, applying microwave heating (within a microwave applicator 3A, 3B) to initiate the chemical reaction and reach a desired temperature and, instantaneous cooling the reaction mixture to a desired lower temperature by using cooling (in zone 26B, 26C) (see Figures 1-6 and col. 5, line 32 – col. 12, line 2). Therefore either Fagrell or Di Martino shows every feature as claimed except for the explicit showing that the cooling is adiabatic. Adams shows a chemical reaction process using electromagnetic radiation heating to use rapid cooling by adiabatic cooling to be well known in the art (see col. 14, lines 7-18). Janner also shows a chemical process with electromagnetic radiation heating and adiabatic cooling (see Figures 1-3, the abstract and col. 3, line 16 – col. 5, line 25). It would have been obvious to an ordinary skill in the art at the time of invention to modify Fagrell or Di Martino to use any well known cooling devices, including cooling by adiabatic expansion, in view of the

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teaching of Adams or Janner for better heating and cooling effect. In regard to claims 8 and 9, the use of these devices and methods for use in a well known process would have been a mere engineering application. More importantly, Fagrell also shows the use of its device for organic synthesis (see page 1, line 11-16).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H. Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
7-3-2007